

# EUROPEAN PATENT OFFICE

## Patent Abstracts of Japan

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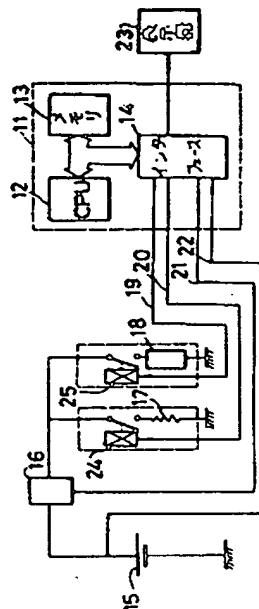
APPLICATION DATE : 24-04-84  
APPLICATION NUMBER : 59082353

APPLICANT : NISSAN MOTOR CO LTD;

INVENTOR : MURAMATSU KUNIHIRO;

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TITLE : BATTERY STATE DETECTOR



ABSTRACT : PURPOSE: To enable the detection of the state of a battery by determining the residual capacity and residual life of the battery from the output thereof and the output impedance.

CONSTITUTION: A data table into which the residual capacity and the residual life data of a battery 15 is registered corresponding to the input/output impedance is inputted into a memory 13 beforehand. A charger 18 and a load device 17 are turned OFF with a microcomputer 11 to measure leakage current flowing into a battery 15 and the terminal voltage. Then, after the load device 17 is OFF while the charger 18 ON, the inflow current to the battery 15 and the charged voltage thereof are measured and the input impedance of the battery 15 is obtained by a specified formula. Then, after the load device 17 is OFF and the charger 18 OFF, the leakage current to a circuit from the battery 15 and the terminal voltage are measured. After the charger 18 is OFF while the load device 17 ON, the outflow current from the battery 15 and the load voltage are measured and the output impedance of the battery 15 is obtained by the specified formula. The data table is retrieved in the memory 13 from the input and output impedances to determine and display 23 the residual capacity and the residual life of the battery 15.

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